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ABSTRACT

Presented is a proposal (submitted to the Canaan, Vermont School Directors) for low-cost inservice workshops to develop a minimum objectives system in language arts and mathematics (K-12). Pairing of learning objectives with a time criteria establishes a minimum rate of learning useful in determining children eligible for special services. Outlined in the proposal are workshop terminal objectives, individual teacher objectives, and a sequential plan for objectives development (including a time line). (LS)

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A PROPOSAL FOR IN-SERVICE DEVELOPMENT OF A MINIMUM OBJECTIVES SYSTEM FOR KINDERGARTEN THROUGH GRADE TWELVE IN LANGUAGE ARTS AND MATHEMATICS

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September 19, 1974

Essex North Supervisory Union
Canaan, Vermont

EC071326

Introduction

Educators and federal officials have repeatedly espoused the goal of equal education for all. Before an equal education can be guaranteed to all children in our public schools, the curricula of the system must be organized in such a way as to preclude any form of exclusion from that system, while at the same time providing a means for identifying children with special needs and evaluating the effectiveness of services for these children.

Burdett (1972) proposed a system of "minimum expected objectives" which would represent those skills all children should master prior to termination of a given number of years of instruction. Christie and McKenzie (1974) have identified the overall implications of such a system as it would relate to Special Education. The pairing of learning objectives with a time criteria establishes a minimum rate of learning; e.g. one month of instructional growth for one month of instruction. Children falling below the minimum rate are eligible for special services, while those at or above the minimum rate are not. Special Education services are judged effective when a child's rate of acquiring minimum skills is accelerated.

The "minimum objectives" model of curriculum design has been implemented in several settings in the state of Vermont. Marcy, Mazzariello, Gehlbach, Lawrence, Bell, Heyman and Christie (1973) were instrumental in the development of a minimum objective system for reading in grades one through four. Data on full implementation (kindergarten through grade six) of reading objectives has been reported by Hill, Wade, Hasazi and Pierce (1974). A proposal (Marcy, 1974) for the development of minimum objectives in Language Arts for kindergarten through grade 6 was submitted to the Vermont Department of Education.

All of the above minimum objectives projects were supported by direct funding from either the University of Vermont or the Vermont State Department of Education. Funds provided consults, technical assistance, and clerical assistance. Two of the projects, Marcy (1974) and Hill et al, (1974) entailed intensive summer workshops for teachers.

Financial constraints would limit the extension of this type of research and development. However, products of these projects provide models which can be revised and adapted by other school districts. A low cost, in-house

model of minimum objectives development is thus proposed in this paper.

The following report consists of a proposal submitted by the authors to the Canaan, Vermont School Directors in September, 1974. providing for a series of in-service workshops to develop a minimum objectives system in Mathematics and Language Arts (kindergarten though grade twelve). Upon approval by that body, the terminal workshop objectives, teacher objectives, and sequence of development (with time line) as noted in this report were devised by the authors.

Implementation of this plan is presently in progress throughout the district. A report of the product of this curriculum development project will be provided upon completion.

Sequence:

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for achievement of objectives ..... page 11

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achieve objectives ..... page 13

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TO: School Directors

FROM: E. Sbardellati, Learning Specialist

RE: In Service Released Time School Year Objectives Workshops

One of the major goals in the Canaan Design for Education (1973) was to provide "all students with the basic skills necessary for life in our society" and to "develop learning objectives for each major curriculum area and means to determine whether the objectives are being met". Full implementation of this plan calls for "articulation of learning objectives for eventual implementations as a Kindergarten-12 educational process" by fall of 1975. The following workshop is thus proposed as a process towards achieving the above stated educational goals.

Workshop Objectives:

A. Further specification of minimum skills in language arts and math (K-12) and high school skills areas.

B. Sequencing of skills in logical developmental order.

C. Refinement of instructional objectives to include desired student behaviors, the conditions under which the behaviors will occur, and the acceptable level of student performance.

D. Development of a system-wide on-going evaluation of student progress toward meeting these instructional objectives.

E. Development of a system to report student progress toward meeting instructional objectives.

Inputs:

A. Instructional objectives already developed in Canaan.

B. Model sets of instructional objectives made available by Learning Specialist.

C. Other resources: articles, texts, etc.

D. One released-time afternoon (1-4 p.m.) per month for all teachers. K-12 and staff members.

E. Additional independent work time by staff.

F. Instructor: Edward Sbardellati*
Assistants: Irene Austin, Robert Surprenant, Andra Chabot

*Mrs. Lu Christie, Instructor, UVM, will provide university support. Overall supervision will be provided by Supt. A. Keith Ober and Principal Chandler Mosher.

ESSEX NORTH INSTRUCTIONAL OBJECTIVES WORKSHOP 1974-75

TERMINAL OBJECTIVES

3.

CONDITIONS	BEHAVIOR	CRITERIA
1. Given an existing Kindergarten-twelve mathematic and language arts curricula, related readings, discussion with peers and instructors, and 14 (half day) released time in-service workshops,	The staff of Essex North will: 1. specify school year minimum objectives in mathematic and language arts (oral reading, comprehension, and word attack skills) 2. sequence the objectives and arrange them with a minimum of nine blocks according to the school calendar 3. devise measures of each objective,	By 5/28/75, such that the minimum objectives: 1. a. are written in Magerian form (Mager 1962) b. represent those objectives which every child should achieve within the school year 2. are logical in terms of skill development 3. should result in an observable and measureable occurrence of the behavior specified in each objective and judged consistent with the Canaan Design for Education.

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4.

2. Given existing courses in the Humanities and the Sciences (grade 7-12), related readings, discussion with peers and instructors and 9 (half day) released time in-service workshops,	1. The selected staff will specify minimum objectives for those existing courses in the Humanities and Sciences. 2. sequence the objectives and arrange them into a minimum of 9 blocks according to the school calendar. 3. devise measures of each objective,	By 5/28/75, such that minimum objectives: 1. a. are written in Magerian form (Mager 1962) b. represent those objectives which every child should achieve within the school year. 2. are logical in terms of skill development. 3. should result in an observable and measureable occurrence of the behavior specified in each objective and are judged consistent with the Canaan Design for Education.

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3. Given existing curriculum in the Humanities and the Sciences (kindergarten-six), related readings discussions with peers and instructors and 12 (half day) released time in-service workshops,	The selected staff will: 1. specify school minimum objectives in the Humanities and Sciences 2. sequence the objectives and arrange them into a minimum of nine blocks according to the school calendar 3. devise measures of each objective,	By 5/28/75, such that minimum objectives; 1. a. are written in Magerian form)Mager 1962) b. represent those objectives which every child should achieve within the school year 2. are logical in terms of skill development 3. should result in an observable and measureable occurrence of the behavior specified in each objective and are judged consistent with the Canaan Design for Education.

INDIVIDUAL TEACHER OBJECTIVES

1. Given at least one grade level in mathematic related readings discussion with peers and instructors, and 5 (half day) released time in-service workshop,	The teacher wile a minimum objective system in mathematic which will: 1. specify shcool year minimum objectives 2. sequence the objectives and arrange them into a minimum of nine blocks according to the school calendar 3. devise measures of each objective,	By 5/28/75, such that minimum objectives: 1. a. are written in Magerian form (Mager 1962) b. represent those objectives which every child should achieve within the school year 2. are logical in terms of skill development 3. should result in an observable and measureable occurrence of the behavior specified in each objective and are judged consistent with the Canaan Design for Education.

7.

2. Given at least one grade level in (language arts) related readings, discussions with peers and instructors, and 9-12 (half day) released time in-service workshop,	The teacher will devise a minimum objective system in (language arts) which will: 1. specify school year (minimum objectives) 2. sequence the objectives and arrange them into a minimum of nine blocks according to the school calendar 3. devise measures of each objective,	By 5/28/75, such that minimum objectives: 1. a. are written in Magerian form (Mager 1962) b. represent those objectives which every child should achieve within the school year 2. are logical in terms of skill development 3. should result in an observable and measureable occurrence of the behavior specified in each objective and are judged consistent with the Canaan Design for Education.

3. Given at least one grade level in the Humanities and/or the Sciences, and a teacher who does not have primary teaching responsibility in mathematics and/or language arts,	The teacher will devise a (minimum objective) system in the Humanities and/or Sciences. 1. specify school year (minimum objectives) 2. sequence the objectives and arrange them into a minimum of nine blocks according to the school calendar 3. devise measures of each objective,	By 5/28/75, such that minimum objectives: 1. a. are written in Magerian form (Mager 1962) b. represent those objectives which every child should achieve within the school year 2. are logical in terms of skill development 3. should result in an observable and measureable occurrence of the behavior specified in each objective and are judged consistent with the Canaan Design for Education.

OBJECTIVES DEVELOPMENT

1. Given a classroom of students and an existing (kindergarten-twelve) curriculum in terminal objectives Mathematics Language Arts Humanities and Science	The teacher will specify enabling skills	Which in the judgement of the teacher are the minimum sets of skills necessary to attain the terminal school year objectives.
2. Given a set of teacher designed minimum skills	The teacher will sequence the skills	Such that in the judgement of the teacher the sequence is logical so that the student will attain the terminal school year objectives.
3. Given a set of sequenced enabling skills	The teacher will write a behavioral objective for each skill	Such that the conditions, behaviors, and criteria are specified in measureable and observable form.
4. Given a set of sequenced behavioral objectives	The teacher will arrange the objectives in instructional probe units	Such that the objectives are divided into a minimum of nine probe units each covering approximately 19 days of material - thus establishing a "time line".

5. Given a set of sequenced behavioral objectives and a teacher estimated "time line" for learner progress towards achieving those objectives	The teacher will share and compare his objectives and time line with other teachers and administrators representing all grade and subject areas	Such that the objectives are an intergral part of a continuum of minimum objectives for that school system.
6. Given a set of sequenced minimim objectives and a specified time line for achieving those objectives	The teacher will write a test for each objective	Such that reliable measures of student progress on monthly objectives can be obtained.

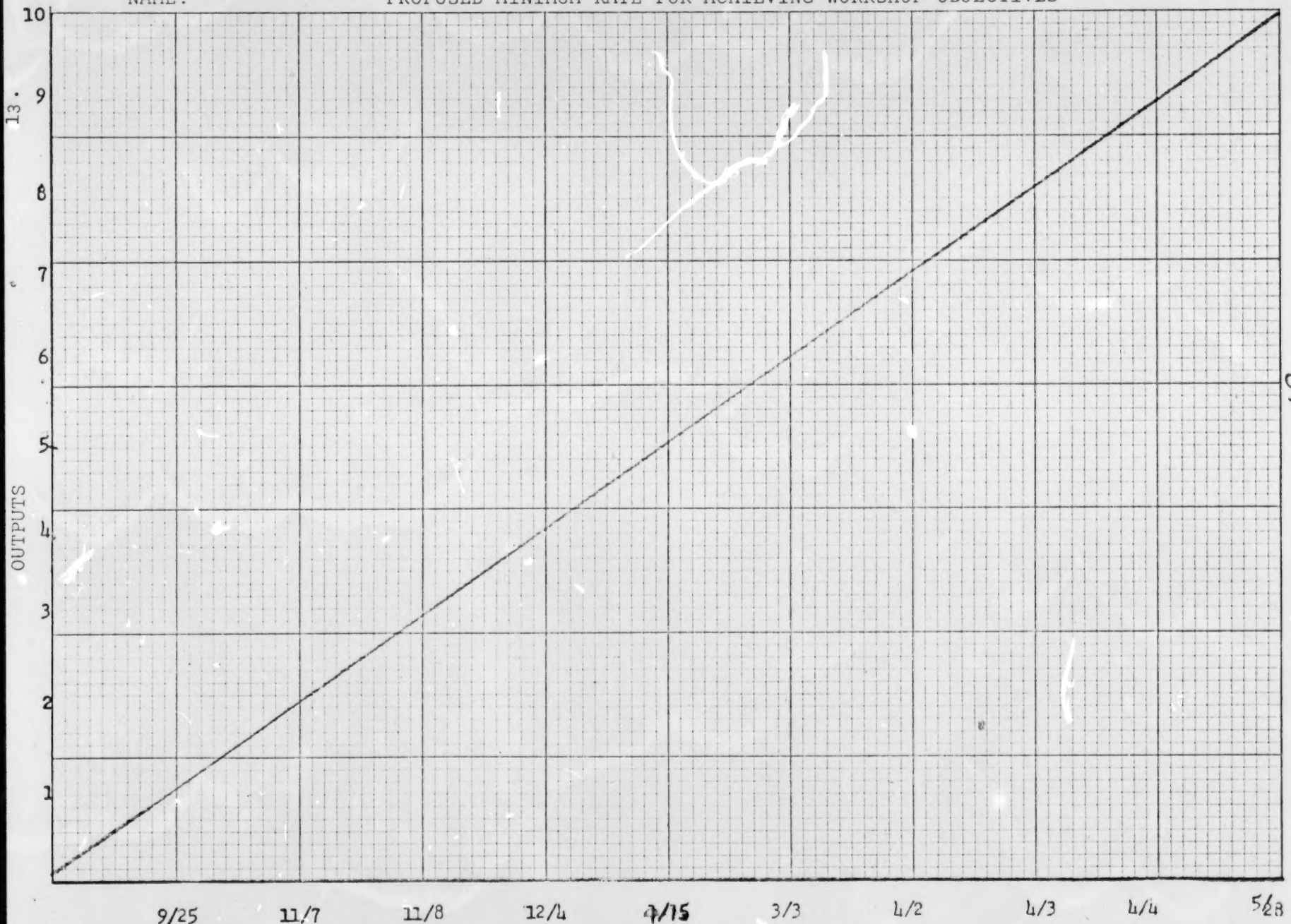
WORKSHOP OUTPUTS

1. 9/25/74 (K-12)	-specify minimum skills (Math or first course area)
2. 11/7/74 (7-12)	-sequence skills
	-write behavioral objectives
	-share and compare objectives with other staff members
11/?/74	-sequence skills
	-write behavioral objectives
	-share objectives with other staff members
3. 11/8/74 (7-12)	-develop probe units (time line)
	-share and compare time line with other staff members
11/?/74 (K-6)	-develop probe units (time line)
	-share and compare time line with other staff members
4. 12/4/74 (K-12)	-develop test for each objective
	-share and compare measurement system with other staff members
5. 1/15/75 (K-12)	-math or first course area system finalized
	-Language Arts or second course area minimum skills specified

6. 3/3/75 (K-12)	-sequence skills
(full day)	-write behavioral objectives
	-share and compare objectives with other staff members
7. 4/2/75 (7-12)	-develop probe units (time line
4/?/75 (K-6)	-develop probe units (time line)
8. 4/3/75 (7-12)	-develop test item for each objective
4/?/75 (K-6)	-develop test item for each objective
9. 4/4/75 (K-12)	-catch up
(full day)	-communication
10. 5/28/75 (K-12)	-Language Arts or second course area finalized
	-Party at Sbardellati's

NAME:

PROPOSED MINIMUM RATE FOR ACHIEVING WORKSHOP OBJECTIVES



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